Remarks/Argument

By the present amendment, Claims 1, 8, and 22 have been amended, and Claims 7 and 38 have been cancelled. The subject matter of cancelled Claims 7 and 38 has been included in amended Claim 1. No new matter has been added by these amendments.

Below is a discussion of the 35 U.S.C. §112, first paragraph, rejections of Claims 1-2, 5, 7, 21-23 and 37-38, and the 35 U.S.C. §103(a) rejection of Claims 1-2.

1. 35 U.S.C. §112, first paragraph, rejection of claims 1-2, 5, 7, 21-23 and 37-38

Claims 1-2, 5, 7, 21-23, and 37-38 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Office Action essentially argues that the negative limitation "wherein the synthetic chimeric protein does not comprise an insulin-like growth factor binding protein (IGFBP)" in Claim 1 incorporates new matter, which is not described in the specification of the present application.

Applicants' representative respectfully submits that the negative limitation "wherein the synthetic chimeric protein does not comprise an insulin-like growth factor binding protein (IGFBP)" is fully supported by the specification of the present application. For example, the specification of the present application (as filed on January 24, 2006) discloses on p. 12, lines 12-15 that:

> "In this regard, although isolated protein complexes that comprise receptor binding domains of IGF-I would also comprise an IGFBP, it is proposed that according to the aforementioned mode of action, an IGFBP is preferably not present in an IGF-I/VN synthetic chimera".

Thus, the negative limitation "wherein the synthetic chimeric protein does not comprise an insulin-like growth factor binding protein (IGFBP)" is fully supported by the specification of the present application.

Accordingly, Applicants' representative respectively submits that the 35 U.S.C. §112, first paragraph, rejection of amended Claim 1 is rendered moot, and requests that the corresponding rejection be withdrawn. Applicants' representative also respectively request that the 35 U.S.C. §112, first paragraph, rejection of Claims 2, 5, 21-23 and 37, which depend either directly or indirectly from amended Claim 1, be withdrawn.

Additionally, Applicants' representative respectively submits that the 35 U.S.C. §112, first paragraph, rejection of Claims 7 and 38 is rendered moot by the present amendment.

2. 35 U.S.C. §112, first paragraph, rejection of claims 1-2, 5, 7, 21-23, and 37-38

Claims 1-2, 5, 7, 21-23, and 37-38 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. The Office Action argues that the limitation "an α_v integrin-receptor binding vitronectin (VN) fragment that does not comprise a heparin binding domain (HBD)" is not sufficiently described because "the specification does not sufficiently describe a representative number of functional fragments of an av integrin-receptor binding vitronectin(VN)

fragment that does not comprise a heparin binding domain (HBP) by actual reduction to practice or by disclosure of relevant identifying characteristics".

Applicants' representative respectfully disagrees with this rejection; however, in order to advance prosecution, Applicants' representative has nonetheless amended Claim 1 to recite that the VN fragment comprises residues 1-52 of mature VN (*i.e.*, the Somatomedin B domain of VN). Support for the amendment to Claim 1 can be found on p. 12, lines 15-20 of the priority document, *i.e.*, Australian Provisional Patent App. No. 2003903896 (a copy of which is submitted herewith). Applicants' representative wishes to point out that a certified copy of the priority document will be submitted in due course.

Accordingly, Applicants' representative respectively submits that the 35 U.S.C. §112, first paragraph, rejection of amended Claim 1 is rendered moot, and requests that the corresponding rejection be withdrawn. Applicants' representative also respectively requests that the 35 U.S.C. §112, first paragraph, rejection of Claims 2, 5, 21-23 and 37, which depend either directly or indirectly from amended Claim 1, be withdrawn.

Additionally, Applicants' representative respectively submits that the 35 U.S.C. §112, first paragraph, rejection of Claims 7 and 38 is rendered moot by the present amendment.

3. <u>35 U.S.C. §103(a) rejection of claims 1-2</u>.

Claims 1-2 were rejected under 35 U.S.C. §103(a) as being unpatentable over Upton *et al.*, *Endocrinology* 140(6):2928-2931, 1999 (hereinafter, "Upton 1999") in view of Nagano *et al.*, *JBC* 267(34):24863-24870, 1992 (hereinafter, "Nagano"), U.S.

Patent No. 5,360,789 to Nakao *et al.* (hereinafter, "Nakao"), Schvartz *et al.*, *Intl. J. Biochem Cell Bio.* 31:539-544, 1999 (hereinafter, "Schvartz"), and Klemke *et al.*, *J. Cell Bio.* 127:859-866, 1994 (hereinafter, "Klemke").

Applicants' representative respectfully disagrees with the instant rejection; however, in order to advance prosecution, Applicants' representative has nonetheless amended Claim 1 to recite that the synthetic chimeric protein comprises IGF-I and an α_v integrin-receptor binding VN fragment.

Applicants' representative respectfully submits that amended Claim 1 is patentable over Upton 1999 in view of Nagano, Nakao, Schvartz, and Klemke because the combination of references fails to teach, disclose, or provide any rational basis for a mammalian cell culture medium comprising a synthetic chimeric protein including IGF-I and an α_v integrin-receptor binding VN fragment. As described on p. 7 of the Office Action, Upton 1999 teaches that VN binds directly to IGF-II, suggesting a role for IGF-II in cell adhesion and invasion (emphasis added). Moreover, the Office Action provides that Upton 1999 teaches that VN specifically binds IGF-II, and the interaction of VN with IGF-II is different to those with other characterized IGF-binding proteins (emphasis added). Thus, Upton 1999 fails to teach, disclose, or provide any rational basis for a mammalian cell culture medium comprising a synthetic chimeric protein that includes IGF-I as one component thereof.

Accordingly, Applicants' representative respectively submits that amended Claim 1 is patentable over Upton 1999 in view of Nagano, Nakao, Schvartz and Klemke, and requests that the 35 U.S.C. §103(a) rejection of Claim 1 be withdrawn.

Additionally, Applicants respectively request that the 35 U.S.C. §103(a) rejection of Claims 2, which depends directly from amended Claim 1, be withdrawn.

Please charge any deficiency or credit any overpayment in the fees for this matter to our Deposit Account No. 20-0090.

Respectfully submitted,

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